

IN THE CLAIMS:

Please cancel claims 2, 4, 6, 8, 9, 11, 12, 14, 15, 17, 18 and 20 without prejudice.

1. (Original) A planetary gear reduction device with a torque limiter function, comprising:

(a) a housing;

(b) an input shaft commonly served by an output shaft of a power source, rotatably supported by one of end of said housing, located at a radially central and axially lower portion of said housing and adapted to take in a torque from the power source;

(c) an output shaft rotatably supported by the other end of said housing, located at a radially central and axially upper portion of said housing adapted to take out the torque transmitted from the power source;

(d) a reduction gear train provided between said input shaft and said output shaft and comprising a plurality of gears meshing with one another; and

(e) a built-in torque limiting mechanism constituted in said reduction gear train,

whereby when an excessive torque is generated in said output shaft, torque transmission from said input shaft to said output shaft is disconnected by an action of said torque limiting mechanism.

2. (Cancelled)

3. (Original) A device according to claim 1,  
wherein said torque limiting mechanism comprises:  
a flange gear mounted to said output shaft fixedly  
in an axial direction and freely in a circumferential  
direction;  
an internal gear formed on an upper surface of  
said flange gear;  
a declutch gear mounted to said output shaft  
freely in the axial direction and fixedly in the  
circumferential direction and adapted to mesh with said  
internal gear; and  
a compression means provided between an upper  
surface of said declutch gear and a lower surface of an  
upper lid of said housing and adapted to constantly  
press said declutch gear toward said internal gear,  
whereby when an excessive torque is generated in  
said output shaft, said declutch gear and said internal  
gear are disengaged from each other by a reaction force  
generated between respective teeth of those gears  
meshing with each other so as to disconnect torque  
transmission from said input shaft to said output  
shaft.

4. (Cancelled)

5. (Original) A device according to claim 1,  
wherein some of gears of said reduction gear train are  
helical gears.

6. (Cancelled)

7. (Original) A device according to claim 3,  
wherein said compression means is a conical compression  
spring.

8-9. (Cancelled)

10. (Original) A planetary gear reduction device  
with a torque limiter function, comprising:

a sun gear fixedly mounted to an input shaft  
rotatably supported and located at a radially central  
and axially lower portion of a housing;

at least one first planetary gear meshing with  
said sun gear through respective teeth formed on their  
respective outer circumferential surfaces;

a stationary ring gear having inner teeth and  
meshing with said first planetary gear through the  
inner teeth thereof;

at least one second planetary gear coaxially and  
integrally mounted on said first planetary gear to

constitute at least one planetary gear pair; an output shaft rotatably supported and located at a radially central and axially upper portion of said housing;

a flange gear mounted to said output shaft fixedly in an axial direction and freely in a circumferential direction and meshing with said second planetary gear through inner teeth formed on a lower portion of an inner circumferential surface thereof;

an internal gear formed on an upper surface of said flange gear;

a declutch gear mounted to said output shaft freely in the axial direction and fixedly in the circumferential direction and adapted to mesh with said internal gear; and

means provided between an upper surface of said declutch gear and a lower surface of an upper lid of said housing and adapted to constantly press said declutch gear toward said internal gear,

whereby when an excessive torque is generated in said output shaft, said declutch gear and said internal gear are disengaged from each other by a reaction force generated between respective teeth of those gears meshing with each other so as to disconnect torque transmission therebetween.

11-12. (Cancelled)

13. (Original) A device according to claim 10,  
wherein said sun gear, said first planetary gear, and  
said ring gear are helical gears.

14-15. (Cancelled)

16. (Original) A device according to claim 10,  
wherein said means for pressing is a conical  
compression spring.

17-18. (Cancelled)

19. (Original) A device according to claim 10,  
wherein a plurality of planetary gear pairs are  
provided along an inner circumferential surface of said  
ring gear.

20. (Cancelled)